

## PEER REVIEW HISTORY

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### ARTICLE DETAILS

<b>TITLE (PROVISIONAL)</b>	Do men consult less than women? An analysis of routinely collected UK general practice data
<b>AUTHORS</b>	wang, yingying; Hunt, Kate; Nazareth, Irwin; Freemantle, Nick; Petersen, Irene

### VERSION 1 - REVIEW

<b>REVIEWER</b>	Professor Phil Hannaford Professor of primary care University of Aberdeen UK No completing interests
<b>REVIEW RETURNED</b>	24-Jun-2013

<b>RESULTS &amp; CONCLUSIONS</b>	<p>This is an interesting paper which used routinely collected data from 446 practices to examine consultation patterns among men and women of different ages. The key finding is the observation that gender differences are largest among people aged 16 to 60 years; differences which are not accounted for simply by differences in consulting for reproductive health problems. Furthermore, gender differences are relatively small when looking at people who might have depression or cardiovascular disease. The study has been well conducted and the paper reads well. It is inevitably quite descriptive, partly because the database from which the sample is derived has a lot of information about potential confounders missing (a limitation acknowledged by the authors in their discussion). I have several comments/matters of clarification.</p> <ol style="list-style-type: none"><li>1. It is not clear what exactly constituted consultation for reproductive reasons- did this include relevant screening such as cervical or breast cancer screening ? Indeed it is not clear whether other types of screening were included in the study or not- this is important because there are (I believe) important gender differences in screening uptake rates. There may also be important gender differences in how people respond to abnormal results from screening .</li><li>2. The authors used receipt of at least two courses of treatment to define depression and cardiovascular disease. The authors acknowledge several limitations of this approach (that there may be gender differences in how doctors diagnose and manage these conditions, and those with mild, untreated episodes may not be captured by the method). Another limitation might be that there</li></ol>
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	<p>may be important gender differences in response to treatments, with one group (women?) more likely to comply with treatment and so pick up a second prescription and so enter the relevant diagnostic group. If my hypothesis is true, this 'compliant with treatment effect' could also affect the overall consultation rates as the more compliant group is likely to see their doctor more often (e.g. for monitoring, to receive follow up treatments or to get help to manage associated risk factors), thereby accounting for at least some of the diminution of gender differences occurring after adjustment for co-morbidity. Although I can see why the authors chose not to use READ diagnosis codes it would have been helpful if they had done some form of 'sensitivity analysis' using diagnostic codes to see they got similar results to those presented using 'treatments for diagnosis'. One further limitation of using treatments to define diagnosis is that the treatments may not be used for the stated diagnosis. For instance, antidepressants are sometimes used to manage chronic pain. If there are gender differences in the prevalence of chronic pain this could have an effect on the results- admittedly a small effect but perhaps one that should be acknowledged in the discussion.</p> <p>3. Given my comments above, it might be more accurate to rename the diagnostic groups as 'treated with antidepressants' and 'treated with cardiovascular drugs' rather than depressed and with cardiovascular disease.</p>
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<b>REVIEWER</b>	<p>Paul Galdas, PhD, RN Senior Lecturer Dept. of Health Sciences, University of York, UK</p> <p>Competing interests: Prof. Hunt is a co-investigator on an NIHR HS&amp;DR grant for which I am Principal Investigator</p>
<b>REVIEW RETURNED</b>	03-Jul-2013

<b>THE STUDY</b>	The statistical methods described appear appropriate; however, this is not my area of expertise and I therefore do not feel able to make an informed judgement.
<b>GENERAL COMMENTS</b>	<p>This is a very important study which contributes appreciably to our understanding of gender patterns in primary care consulting rates, and in particular, whether they vary by deprivation status and/or underlying morbidities. This paper will make a valuable contribution to the existing literature in this area.</p> <p>Over the past decade, research has illustrated connections between male socialization, the construction of masculinities, and men's reluctance to seek medical help. Importantly, this work has highlighted the often deleterious impact that alignment to male gender ideals can have on men's decisions to promptly access health services for both preventative care and during times of acute and long-term ill health. However, as pointed out by the authors, this literature has also served to reinforce a widespread assumption</p>

	<p>that men ‘in general’ are less willing to utilise health services (and primary care services in particular) than women – an oversimplification of a complex phenomenon.</p> <p>As also pointed out in the introduction to this paper, previous evidence to support the notion that men are less likely to consult primary care professionals than women has been limited to self-report data and/or overlooked potential differences in consultation rates according to morbidities/socio-economic status/ethnicity/female reproductive visits etc. (the ‘Percentage of men/women consulting a medical doctor during the past 12 months’ data used to explain men’s lower rates of primary care help-seeking in the European Commission: State of Men’s Health in Europe Report is a good example of this).</p> <p>The major contribution of this study to the evidence-base is that by considering the confounding effect of deprivation and underlying morbidities, the findings serve to highlight the complexity of gender patterns in primary care consultation rates. By drawing on a large pool of representative, UK-wide data on cardiovascular disease and depression-related prescriptions, the authors show that differences in the frequency with which men and women consult primary care are not static binaries; i.e. men are not universally lower users of primary care services, and women are not universally ‘excess’ users. One way I think this paper could be improved is by providing a little more in the way of explanation for the observed socio-economic gradient in consulting rates seen amongst women, but not amongst men. There is also some recent qualitative work that has argued for a more fluid approach to considering the effect of gender on help-seeking that support the findings of this study and might contribute to the discussion section.</p> <p>That being said, overall, this study does considerably strengthen the empirical basis for men’s lower consultation rates in early adulthood and mid-life, even after considering confounding characteristics. For those not familiar with the gender and help-seeking literature, I suspect that this may be a ‘headline’ finding from this research (and the answer to the question in the title). As such, I wonder whether this point could be made a little clearer in the conclusion; e.g., although differences between men’s and women’s primary care consultation rates are modest when underlying morbidities are considered, the study also confirms that men’s rate of primary care consultation remains sub-optimal.</p> <p>Finally, I think it would improve clarity if a brief justification/rationale for the focus on depression and CVD as the underlying morbidity exemplars used to compare consultation patterns between men and women is added to the methods section (i.e. common/GP managed/some gender differences in morbidity and mortality).</p>
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## VERSION 1 – AUTHOR RESPONSE

We were very pleased to read their positive assessments of the paper and its potential contribution to the evidence base. We were delighted to hear that they have recommended publication with minor revisions to our manuscript. We are happy to submit this response to their comments; the amendments in our revised manuscript are visible in track changes as requested. We hope that you agree that the paper is improved as a result of their suggestions and that you will judge the revised manuscript acceptable for publication in BMJ Open. We have outlined below our response to each of the referees' points.

Reviewer 1: Professor Phil Hannaford

"It is not clear what exactly constituted consultation for reproductive reasons- did this include relevant screening such as cervical or breast cancer screening ? Indeed it is not clear whether other types of screening were included in the study or not- this is important because there are (I believe) important gender differences in screening uptake rates. There may also be important gender differences in how people respond to abnormal results from screening."

We have amended the text on p5 in the methods to make it clearer what we define as constituting a consultation for 'reproductive reasons'; this does not include screening for cervical cancer, breast or prostate cancer or any other screening.

"The authors used receipt of at least two courses of treatment to define depression and cardiovascular disease. The authors acknowledge several limitations of this approach .... Another limitation might be that there may be important gender differences in response to treatments, with one group (women?) more likely to comply with treatment and so pick up a second prescription and so enter the relevant diagnostic group. If my hypothesis is true, this 'compliant with treatment effect' could also affect the overall consultation rates as the more compliant group is likely to see their doctor more often (e.g. for monitoring, to receive follow up treatments or to get help to manage associated risk factors), thereby accounting for at least some of the diminution of gender differences occurring after adjustment for co-morbidity."

We have added this as a further limitation in the discussion.

"Although I can see why the authors chose not to use READ diagnosis codes it would have been helpful if they had done some form of 'sensitivity analysis' using diagnostic codes to see they got similar results to those presented using 'treatments for diagnosis'".

We considered carefully how best to identify patients with cardiovascular disease and depression in the early stages of specifying our analysis, drawing on the extensive knowledge that three of the authors have of the THIN data. The text explaining this decision now reads: "We chose to use prescription data rather than Read codes to identify patient with medical diagnoses of these conditions as we are aware that diagnoses are not consistently recorded by general practitioners; whilst some doctors record a diagnosis such as depression each time a patient consults, others will not include the diagnosis on the patient record for a consultation if it has been previously recorded, whereas medications are recorded more consistently. Furthermore, the issue of a prescription suggests that the underlying morbidity is sufficiently serious to warrant medication." Because we believe that the receipt of medication is the best way of identifying these patients (and that the

Read codes are likely to be unreliable in this regard) we do not think that the 'sensitivity' analysis would be help; rather we think it is better to be clear about the limitations to using receipt of medications to identify patients with these specific morbidities.

One further limitation of using treatments to define diagnosis is that the treatments may not be used for the stated diagnosis. For instance, antidepressants are sometimes used to manage chronic pain. If there are gender differences in the prevalence of chronic pain this could have an effect on the results- admittedly a small effect but perhaps one that should be acknowledged in the discussion.

We agree with this point and have added this as an additional limitation in the discussion, "It might be more accurate to rename the diagnostic groups as 'treated with antidepressants' and 'treated with cardiovascular drugs' rather than depressed and with cardiovascular disease."

We agree with this suggestion and have amended the text and tables accordingly.

Reviewer 2: Paul Galdas

"The major contribution of this study to the evidence-base is that by considering the confounding effect of deprivation and underlying morbidities, the findings serve to highlight the complexity of gender patterns in primary care consultation rates ... One way I think this paper could be improved is by providing a little more in the way of explanation for the observed socio-economic gradient in consulting rates seen amongst women, but not amongst men. There is also some recent qualitative work that has argued for a more fluid approach to considering the effect of gender on help-seeking that support the findings of this study and might contribute to the discussion section."

Because the data within the THIN data do not allow us to explore explanations for this interaction between gender and deprivation status, we do not think we can offer likely reasons. We now state in the discussion that this finding was unexpected and warrants further research in other studies.

"overall, this study does considerably strengthen the empirical basis for men's lower consultation rates in early adulthood and mid-life, even after considering confounding characteristics. For those not familiar with the gender and help-seeking literature, I suspect that this may be a 'headline' finding from this research (and the answer to the question in the title). As such, I wonder whether this point could be made a little clearer in the conclusion; e.g., although differences between men's and women's primary care consultation rates are modest when underlying morbidities are considered, the study also confirms that men's rate of primary care consultation remains sub-optimal."

We have added a sentence to this effect to the conclusion, although we have not used the term 'sub-optimal' because we are not able to take account of all underlying morbidity in male and female patients in the study.

"Finally, I think it would improve clarity if a brief justification/rationale for the focus on depression and CVD as the underlying morbidity exemplars used to compare consultation patterns between men and women is added to the methods section (i.e. common/GP managed/some gender differences in morbidity and mortality)."

We have amended the text in the methods on p5-6 to explain our rationale for focusing on these conditions as suggested.